



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/990,901	11/16/2001	Roy E. Scheuerlein	023-0001	3463

22120 7590 03/11/2004
ZAGORIN O'BRIEN & GRAHAM, L.L.P.
7600B N. CAPITAL OF TEXAS HWY.
SUITE 350
AUSTIN, TX 78731

EXAMINER

NGUYEN, HIEP T

ART UNIT PAPER NUMBER

2187

DATE MAILED: 03/11/2004

8

Please find below and/or attached an Office communication concerning this application or proceeding.

h

Office Action Summary

Application No.

09/990,901

Applicant(s)

SCHEUERLEIN, ROY E.

Examiner

Hiep T Nguyen

Art Unit

2187

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 November 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-49 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-5, 8-14 and 29 is/are allowed.
- 6) ☒ Claim(s) 38, 44, 45 and 47 is/are rejected.
- 7) ☒ Claim(s) 6, 15-28, 30-37, 39-41, 43, 46, 48 and 49 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 2.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-49 are presented for examination.

Claim Objections

2. Claims 15-28, 30-37, 39-44, 46, and 48-49 are objected to because of the following informalities:
 - a. As per claims 15 and 16: in line 1, "invention" should be replaced with –integrated circuit-. See also line 1 of claims 18-28, 30-37, 39-44, 46, and 48-49.
 - b. As per claim 17: line 2, it appears that "as a plurality of" should be replaced with –in--.
3. Claim 6 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Claim 6 is a duplicate of claim 5.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
5. Claims 7 and 42 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
 - a. As per claim 7: line 2, "the non-volatile memory array" lacks proper antecedent basis.
 - b. As per claim 42:
 - i. Line 2, "512" should be replaced with –512 bytes—to avoid a problem of indefiniteness.
 - ii. Line 3, similarly to line 2, "528" should be replaced with –528 bytes--.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

Art Unit: 2187

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

7. Claims 38, 44, 45, and 47 are rejected under 35 U.S.C. 102(e) as being anticipated by Kim, U.S. patent No. 6,694,422.

- a. As per claim 38: Kim teaches an integrated circuit [figure 5] comprising: A memory array [501] addressable as a plurality of P1 of pages of a width S1 defining a corresponding number of bits N1, and also addressable as a plurality of P2 of pages of a width S2 defining a corresponding number of bits N2, wherein P1 is not equal to P2, and S1 is not equal to S2 [see col. 6, lines 55 through col. 7, line 16].
- b. As per claim 44: Kim further teaches that "the memory comprises a plurality of non-volatile memory sub-arrays; and the memory is configured to store more than one bit at each page location" [see again figure 5 and col. 7, line 5].
- c. As per claims 45 and 47: the claimed integrated circuit basically encompasses the same scope of hat of claim 38. Accordingly, claims 45 and 45 are rejected for the same reason as set forth for claim 38.

Allowable Subject Matter

8. Claims 1-5, 8-14, and 29 are allowed over the prior art of record. Claim 7 would also be allowed over the prior art of record if amended to overcome the rejection under 35 USC 112, second paragraph, above. Claims 15-28 and 30-37 would also be allowed over the prior art of record if amended to overcome he minor objection, above.

Art Unit: 2187

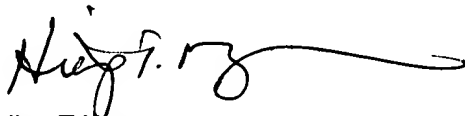
9. Claims 39-40, 46, and 48 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Consequently, claims 41-43 and 49 would also be allowed over the prior art of record given that claim 42 is amended to overcome the rejection under 35 USC 112 second paragraph, above.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
- a. Lo et al., 5,138,705, teaches an extendable memory structure.
 - b. Greene et al., 5,860,076, teaches a 438-bit wide memory architecture addressing scheme re-configurable for 8-bit, 16-bit and 32-bit data accesses.
 - c. Freker, 6,041,016, teaches a memory device that supports multiple page sizes.
 - d. Granapathy et al., 6,112,285, teaches a multiple page sizes that can be used by application programs.
 - e. Cleveland et al., 6,567,289, teaches a physical memory layout with various sized memory sectors.
11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hiep T Nguyen whose telephone number is (703) 305-3822. The examiner can normally be reached on Monday-Friday from 9:30 a.m. to 6:00 p.m.
12. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Donald Sparks can be reached on (703) 308-1756. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2187

13. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Hiep T Nguyen
Primary Examiner
Art Unit 2187

HTN